Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Redevelopment of Spectrum to	)	ET Docket No. 92-9
Encourage Innovation in the	)	
Use of New Telecommunications	)	RM-7981
Technologies	)	RM-8004

To: The Commission

REPLY COMMENTS OF THE
UTILITIES TELECOMMUNICATIONS COUNCIL
ON THE
FURTHER NOTICE OF PROPOSED RULEMAKING

Jeffrey L. Sheldon
General Counsel

Sean A. Stokes
Staff Attorney

UTILITIES TELECOMMUNICATIONS
COUNCIL
1140 Connecticut Avenue, N.W.
Suite 1140
Washington, D.C. 20036
(202) 872-0030

January 27, 1993

Table of Contents

SUMMARY ii

I INTRODUCTION 1

II. REALLOCATION AND CHANNELIZATION PLAN 2

A. Commenters Support Proposed Reallocation 2

B. Rechannelization Must Accommodate Both Narrowband And Wideband Applications 3

C. No Loading Standards For Private Systems With Bandwidths Of 10 MHz or Less 7

D. 3.7-4.2 GHz Band 8

E. Digital Termination Systems 11

III. FEDERAL GOVERNMENT SPECTRUM 12

A. 1710-1850 MHz Government Band 12

B. 3.6-3.7 GHz Shared Government/Non-Government Band. 13

IV. COORDINATION PROCEDURES/TECHNICAL STANDARDS 14

A. Coordination Procedures Should Discourage Spectrum Warehousing 14

B. Interference Standards 17

C. Rules Should Not Inhibit The Use Of Analog . . . 17

D. "Temporary Licensing" Should Be Authorized . . . 19

V. CONCLUSION 23

SUMMARY

UTC continues to support the Commission's basic proposals contained in the FNPRM, as they are generally consistent with the proposals that UTC suggested in its petition for rulemaking. UTC supports the FCC's proposal to rechannelize and reallocate the microwave bands above 3 GHz to private and common carrier microwave licensees on a co-primary basis, including the 4 GHz band. Further, UTC urges the FCC to follow through with its commitment to pursue discussions with NTIA regarding the introduction of private fixed microwave operations into the 1710-1850 MHz band and the 3.6-3.7 GHz band.

From the perspective of microwave system users, neither the FCC's channelization plan nor the alternative channelization plan recommended by TIA and the Joint Commenters, appears to have an inherent advantage over the other. However, irrespective of the specific channel plan ultimately adopted by the FCC, rechannelization must maximize the number of channels available to accommodate: (1) existing 2 GHz systems that would be displaced by new, emerging technologies; and (2) new systems that would have been licensed in the 2 GHz band but for the FCC's new, secondary-only, licensing policy for the 2 GHz band. Further, rechannelization must provide sufficient flexibility to accommodate the increasing bandwidth requirements of many private microwave users (e.g., 30 MHz).

UTC agrees with other commenters that the coordination procedures and technical rules for the shared microwave bands should be consistent to eliminate any regulatory incentive for licensees to seek access to one band over another. To the extent that the interference standards differ, UTC recommends adoption of standards developed by TIA. Further, in order to foster better spectrum usage and to ensure that private users are not "locked out" of wideband spectrum, UTC recommends adoption of policies that will prevent the "warehousing" of spectrum through the reservation of growth channels. UTC also supports the authorization of "temporary licensing." Finally, UTC urges the FCC not to adopt any rules that would expressly or implicitly preclude the use of analog microwave equipment in the bands above 3 GHz.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Redevelopment of Spectrum to	)	ET Docket No. 92-9
Encourage Innovation in the	)	
Use of New Telecommunications	)	RM-7981
Technologies	)	RM-8004

To: The Commission

REPLY COMMENTS OF THE
UTILITIES TELECOMMUNICATIONS COUNCIL
ON THE
FURTHER NOTICE OF PROPOSED RULEMAKING

Pursuant to Section 1.415 of the Federal Communications Commission's (FCC) Rules, the Utilities Telecommunications Council (UTC) hereby submits its reply comments with respect to the Further Notice of Proposed Rulemaking (FNPRM), 7 FCC Rcd 6100 (1992), in the above captioned proceeding.[1/] The FNPRM seeks comment on various issues relating to the amendment of the Commission's Rules in order to accommodate microwave systems in the bands above 3 GHz.

I. INTRODUCTION

UTC, as the national representative on communications matters for the nation's electric, gas, water, and steam

---

[1/] On January 7, 1993, the FCC released an Order, DA 93-5, extending the time for filing reply comments in this proceeding to January 27, 1993.

utilities, submitted comments focused on the need to have appropriate and adequate replacement spectrum with equivalent reliability to the 2 GHz band in place, for use by microwave users prior to any forced relocation of existing 2 GHz microwave users. Accordingly, UTC's comments expressed general support for the proposals contained in the FNPRM, as they are generally consistent with the proposals that UTC suggested in its March 31, 1992, "Petition for Rulemaking."[2/] Below, UTC again addresses these issues, in the context of the comments filed by the various parties in this proceeding.

II. REALLOCATION AND CHANNELIZATION PLAN

A. Commenters Support Proposed Reallocation

Under the Commission's proposed band sharing plan the distinctions between private and common carrier services would be eliminated for purposes of determining access to particular microwave bands above 3 GHz. The overwhelming majority of commenters, including UTC, support this proposal. For example, the Telecommunications Industry Association's Fixed Point-to-Point Communications Section (TIA) specifically endorses the adoption of rules allowing for the shared use of the higher microwave bands between private and common carrier microwave users.[3/]

[2/] UTC's Petition for Rulemaking was placed on Public Notice May 1, 1992, FCC mimeo no. 22934, and was designated as RM-7981.

[3/] TIA, p. 2.

B. Rechannelization Must Accommodate Both Narrowband And Wideband Requirements

While the majority of commenters echo UTC's support for a rechannelization of the microwave bands above 3 GHz in order to adequately accommodate the bandwidth requirements of displaced private 2 GHz microwave operations, there is a fundamental disagreement among certain parties as to the appropriate channelization scheme.

The channelization proposal contained in the FNPRM provides for overlapping 1.6 MHz-based channels and is based in large part on a channelization plan suggested by Alcatel Network Systems (Alcatel) in its May 22, 1992, "Petition for Rulemaking."[4/] In its comments, TIA recommends a 1.25 MHz-based channelization plan as being superior to the proposed 1.6 MHz-based plan. TIA maintains that 1.25 MHz channels can be easily stacked to accommodate larger bandwidth channels (e.g., 5, 10, 30 MHz) without wasting spectrum. In contrast, TIA maintains that a 1.6 MHz-based channelization plan cannot be easily multiplied into 5, 10, 30 MHz standard bandwidth channels without leaving spectrum "remnants."[5/] In jointly filed comments, Harris Corporation-Farinon Division, Digital Microwave Corporation, and Telesciences, Inc. (Joint Commenters) echo TIA's argument against a 1.6 MHz-based plan and stress the need for a 1.25 MHz-based

---

[4/] Alcatel's Petition for Rulemaking was placed on Public Notice June 2, 1992, DA 92-705, and was designated as RM-8004.

[5/] TIA, pp. 5-7.

channelization plan.[6/]

Consistent with their opposition to a 1.6 MHz-based channelization plan, TIA and the Joint Commenters also recommend elimination of the proposal to create 400 kHz and 800 kHz channels in the upper microwave bands.[7/] For example, TIA argues that after the migration of 2 GHz microwave users to the upper microwave bands, systems employing 400 kHz or 800 kHz channels will not be cost-effective. Furthermore, TIA maintains that the few existing users of the 800 kHz analog radios in the 2 GHz band who migrate to higher microwave bands can be effectively accommodated in 1.25 MHz channels.[8/]

AT&T also suggested an alternate channelization scheme.[9/] However, this proposal is inconsistent with the other channelization plans and appears to be wholly inadequate to meet the needs of the private microwave user community. Moreover, AT&T's plan includes a reservation of spectrum in the 6 GHz band for emerging personal communications technologies.[10/] Such a reservation is premature and fundamentally at odds with the purpose of the FNPRM. In early-filed Reply Comments Comsearch

---

[6/] Joint Commenters, pp. 5-7.

[7/] TIA, p. 7; and Joint Commenters, p. 8.

[8/] TIA, p. 7.

[9/] AT&T, Appendix A.

[10/] AT&T, pp. 5-6.

agrees with UTC and opposes AT&T's plan stating that the loss of 220 MHz of bandwidth at 2 GHz makes it imperative that the upper microwave bands continue to be allocated to point-to-point uses.[11/]

UTC has examined both the FCC's channelization proposal and the alternative channelization plan recommended by TIA and the Joint Commenters. From the perspective of microwave system users both plans have positive attributes to recommend them, but neither plan appears to have an inherent advantage over the other. Accordingly, rather than endorsing a particular channelization plan, UTC wishes to emphasize those attributes which it considers to be essential to a successful rechannelization of the upper microwave bands. Rechannelization must maximize the number of channels available to accommodate: (1) existing 2 GHz systems that would be displaced by new, emerging technologies; and (2) new systems that would have been licensed in the 2 GHz band but for the FCC's new, secondary-only, licensing policy for the 2 GHz band. Further, rechannelization must provide sufficient flexibility to accommodate the increasing bandwidth requirements of many private microwave users (e.g., 30 MHz).

In particular, UTC notes that the rechannelization and technical rules must accommodate the 13,000 existing 2 GHz

---

[11/] Comsearch Reply Comments, p. 8.

"skinny route" stations, approximately half of which operate on 800 kHz channels.[12/] Contrary to TIA's implication this is not an insignificant number. Similarly, UTC disagrees with Comsearch's assessment that a total of eighteen (18) 800 kHz and ten (10) 1.6 MHz channel pairs will be sufficient spectrum to accommodate all narrowband user requirements.[13/] Comsearch cites a review of narrowband usage in the upper 6 GHz band as the basis for its recommendation.[14/] However, since it is unknown what technologies will be allocated to the 2.1 GHz band or their sharing characteristics, it must be assumed that all of the existing "skinny route" stations will need to be relocated to spectrum located above 3 GHz. Therefore, Comsearch's reliance on existing usage of narrowband channels in the upper 6 GHz band to project the future need for narrowband channels in the microwave bands above 3 GHz is misplaced.

Accordingly, if the channelization scheme ultimately adopted does not contain 800 kHz channels, the Commission's Rules must nevertheless allow systems with bandwidth requirements of less

---

[12/] The "skinny route" is the 2.10-2.20 portion of the 2 GHz band. UTC concurs with Comsearch that the proposal to create 400 kHz channels should be eliminated as the current minimum bandwidth at 2.1 GHz is 800 kHz. Comsearch Reply Comments, p. 2.

[13/] Comsearch Reply Comments, p. 6.

[14/] Currently the "skinny route" 2.13-2.15 and 2.18-2.20 GHz private microwave bands are channelized into 24 pairs of 800 kHz, or 11 pairs of 1600 kHz, channels. Thus, Comsearch is actually proposing a reduction in the total overall number of narrowband channels.

than the minimum channel bandwidth to obtain licensing (i.e., allow an 800 kHz 2 GHz system to relocate to a 1.25 MHz channel in the 6 GHz band).

Finally, UTC suggests that the FCC defer the effective date of the rules adopted in this proceeding for one year in order to ensure that no particular equipment manufacturer has an unfair competitive advantage in meeting the new channelization requirements.[15/] A delay of one year should not have an adverse impact upon the development of emerging technologies, such as PCS, since it is apparent that this proceeding will be resolved long before the proceedings associated with the initiation of PCS.

C. No Loading Standards For Private Systems With Channel Bandwidths Of 10 MHz Or Less

Given the need to accommodate a significant number of private microwave systems with low bandwidth capacity requirements in the bands above 3 GHz, it would be inappropriate to adopt loading standards that effectively foreclose the use of these bands for narrowband operations. For example, if the FCC adopts a 1.25 MHz channelization plan, loading standards should not preclude an 800 kHz system from operating on a 1.25 MHz channel. Accordingly, UTC reiterates its recommendation that

---

[15/] For example, Joint Commenters note that the vast majority of U.S. microwave manufacturers do not produce equipment compatible with 1.6 MHz channels, and that adoption of the FCC's proposed plan would give a competitive advantage to one manufacturer.

there be no loading standards for private microwave systems operating on systems above 3 GHz with bandwidths of 10 MHz or less.

The comments of both TIA and the Joint Commenters recommend adoption of a 50 percent loading requirements for wideband channels (defined by each as 10 MHz and 15 MHz respectively).[16/] UTC does not oppose this suggestion, provided that such a requirement is limited to channels with bandwidths of greater than 10 MHz.[17/]

D. 3.7-4.2 GHz Band

Numerous commenters agree with UTC that the Commission should rechannelize the 3.7-4.2 GHz (4 GHz) band in order to accommodate the needs of both displaced 2 GHz microwave users and new microwave users. For example, the American Petroleum Institute (API) supports the proposed rechannelization of the 4 GHz band and believes that it will give its members the flexibility to accommodate different system requirements.[18/]

A limited number of parties representing the satellite industry filed comments objecting to a rechannelization of the 4

[16/] TIA, pp. 9-10; Joint Commenters, pp. 10-11.

[17/] The Commission may want to adopt a relaxed loading standard for rural non-congested areas in order to encourage the development of broadband communications systems.

[18/] API, p. 10.

GHz band. These commenters, as anticipated by UTC, oppose a rechannelization of the 4 GHz band predicting intolerable interference to satellite operations. For example, GTE Service Corporation (GTE) argues that the proposed restructuring of the 4 GHz band will severely and adversely impact the interference potential for all satellite services using the band.[19/] Similarly, GE Americom states that the proposed plan will inflict intolerable interference on the users of C-band satellite technology.[20/] In addition to interference to licensed satellite operations, GTE, GE Americom and other satellite service providers also oppose the proposed rechannelization of the 4 GHz band on the basis of anticipated interference to unlicensed "backyard" satellite antennas.

UTC, however, continues to consider these concerns to be largely unfounded. As noted in UTC's comments, proper frequency coordination procedures will serve to protect licensed fixed satellite systems in the 4 GHz band.[21/] Moreover, while the proposed rechannelization plan may arguably require more precise coordination procedures in the 4 GHz band, these changes are necessary to make the band a viable replacement "home" for

---

[19/] GTE, p. 2.

[20/] GE Americom, p. 2.

[21/] In comments filed on June 5, 1992, in response to the initial Notice of Proposed Rulemaking in this proceeding, Comsearch indicated that the key to relocating 2 GHz stations into the 4 GHz band, and other, higher microwave bands is proper frequency engineering, pp. 2-3.

displaced 2 GHz users.

In any event, and as noted in UTC's comments, unlicensed satellite earth stations operating in the 4 GHz band are not entitled to interference protection, and thus, potential interference to these stations is not a valid justification for rejection of the Commission's rechannelization plan. Further, UTC reiterates its suggestion that the Commission use this proceeding to explicitly affirm that unlicensed "backyard" dish owners are not entitled to any interference protection from terrestrial microwave operations.[22/]

Finally, notwithstanding UTC's confidence in the ability of coordination to resolve potential interference, UTC reasserts that the remaining concerns regarding potential interference could be resolved if, as suggested in UTC's petition, the FCC would reallocate part of the 4 GHz band for exclusive, primary use by terrestrial operators. Such an exclusive allocation, which could be phased-in over a reasonable transition period, would also eliminate concerns over interference to unlicensed satellite receive-only earth stations.

[22/] Although unlicensed earth stations are not entitled to interference protection, UTC understands that many carriers refrain from installing new microwave systems in this band due to the potential for consumer interference complaints: UTC suspects that private microwave users would also proceed cautiously in installing systems in this band. However, the mere presence of unlicensed receivers in the band should have no bearing on the Commission's decision to expand the opportunities for licensed operations.

E. Digital Termination Systems

UTC disagrees with Bell Atlantic's suggestion that digital termination systems (DTS) grandfathered in the 10 GHz band should be allowed to expand operations.[23/] Expansion of DTS systems will further complicate the extremely difficult nature of implementing a point-to-point systems in a DTS environment.

However, if additional nodal and end user locations are to be permitted under the definition of grandfathered DTS systems, UTC agrees with Comsearch that some form of coordination must be implemented. Otherwise, as Comsearch notes, point-to-point microwave users will be precluded from using frequencies within a potentially wide area of operation in the proximity of a DTS system.[24/]

UTC also disagrees with the statement of SR Telecom, Inc. that reallocation of this band for point-to-point would be premature. This band has been allocated for point-to-multipoint operations for 10 years, and shows little current activity. This has been a more than sufficient period for the development of DTS, and it is time to allocate the band for a service for which there is already a demand.

[23/] Bell Atlantic, p. 2.

[24/] Comsearch Reply Comments, p. 10.

III. FEDERAL GOVERNMENT SPECTRUM

D. 1710-1850 MHz Government Band

The majority of commenters in this proceeding echo UTC's request that the FCC renew its efforts to expedite negotiations with the National Telecommunications and Information Administration (NTIA) regarding access to the 1710-1850 MHz Federal government band by displaced 2 GHz microwave users. As UTC noted, relocation of displaced 2 GHz microwave users to the 1710-1850 MHz band would cause the least disruption to on-going 2 GHz operations, since the propagation characteristics of both bands are nearly identical.

Moreover, UTC agrees with the Joint Commenters' assessment that the designated spectrum above 3 GHz is not adequate to meet current and/or future spectrum needs of the private and common carrier microwave systems operating in those bands and the more than 29,000 users who will be required to migrate from the 2 GHz band.[25/]

UTC also agrees with TIA that with proper coordination, Federal government and non-Federal government microwave users can easily co-exist in the 1710-1850 MHz band.[26/] Accordingly, UTC reiterates its request that the Commission adopt specific procedures for 2 GHz microwave users to request access to the

---

[25/] Joint Commenters, p. 23.

[26/] TIA, p. 14.

1710-1850 MHz band. As noted in UTC's comments, the FCC could use the procedures adopted in the 932-935 MHz and 941-944 MHz shared bands as a model. In the 932/941 MHz band private users apply to the FCC for a license, the FCC coordinates with NTIA, and the FCC issues the license to the applicant.[27/]

B. 3.6-3.7 GHz Shared Government/Non-Government Band

A number of commenters agree with UTC that the FCC should pursue negotiations with NTIA regarding a reallocation of the 3.6-3.7 GHz band to private and common carrier fixed use on a co-primary basis with existing government and non-government aeronautical radionavigation, radiolocation, and fixed satellite services. As API notes, the 3.6-3.7 GHz band has propagation characteristics suitable for long-haul communications and would thus be capable of supporting the long microwave paths being displaced from the 2 GHz band. API therefore argues that the 3.6-3.7 GHz band must be included as one element of the FCC's overall effort to provide meaningful relief for licensees currently operating in the 2 GHz band.[28/]

Moreover, and as UTC noted, the 3.6-3.7 GHz band is currently utilized for satellite operations, and thus, it would appear to be feasible to share this band with fixed microwave

---

[27/] Second Report and Order in GEN. Docket No. 82-243, FCC 89-45 (1989).

[28/] API, p. 13.

users under coordination criteria similar to that which is employed in the 4 GHz band. Accordingly, UTC renews its request that the Commission follow through with its commitment to pursue discussions with NTIA regarding the introduction of fixed microwave operations into the 3.6-3.7 GHz band.

IV. COORDINATION PROCEDURES/TECHNICAL STANDARDS

A. Coordination Procedures Should Discourage Spectrum Warehousing

The commenters generally agree with UTC that the coordination procedures and technical rules for the shared microwave bands should be consistent to eliminate any regulatory incentive for licensees to seek access to one band over another.[29/] UTC noted that at present, the principle differences between common carrier and private microwave coordination is the requirement, at Section 21.100, for common carrier applicants to serve "prior coordination notices" on potentially affected applicants and licensees, and to wait for responses before filing applications with the FCC. These requirements increase the cost of frequency coordination and delay applicants' ability to commence operation and could serve as a catalyst for most applicants to select the upper private 6 GHz band due to its streamlined coordination procedures. Accordingly, UTC maintained that the easiest way to make the coordination procedures consistent is to impose the common

---

[29/] e.g., TIA, p. 13; and Comsearch Reply Comments, p. 11.

carrier prior coordination notification requirements of Section 21.100 on applicants for the upper 6 GHz microwave band.[30/]

Further, with the significant increase in bandwidth available to carriers under the proposed channelization plan, UTC maintained that there is no need for carriers to retain the ability to reserve growth channels on an indefinite basis. UTC argued that while coordinators should be encouraged to avoid blocking other users' access to growth spectrum, there is no reason for the FCC to institutionalize the warehousing of spectrum by permitting repeated renewals of coordination notifications.

In addressing this situation, TIA states its belief that any reservation of growth channels should be administered by the Commission. Further, TIA recommends that unlicensed spectrum reserved by a user should be made available for licensing by other users on a first come, first served basis upon a showing that no other channels can be coordinated.[31/] UTC would support the adoption of such a requirement in order to foster better spectrum usage.

[30/] Use of Section 21.100 coordination procedures is already required for private users accessing other shared microwave bands. See 47 C.F.R. § 94.63(a).

[31/] TIA, p. 14.

As an alternative to TIA's proposal, UTC renews its suggestion that the FCC amend Section 21.100(d)(2)(x) to limit the ability of licensees to renew their coordination notification to a single six month period after the expiration of the original notification period, and to prohibit recoordination for at least six months if no application is filed during this 12-month period. In its Reply Comments Comsearch objects to UTC's proposal arguing that a prohibition on coordination or renewal of a proposal after a set period of time is not necessary as prior coordinated proposals have secondary or no standing at the FCC.[32/] UTC submits that if this is indeed the case, the Commission should specifically clarify this point. That is, the FCC should make clear that "reservation" or "growth channel" designations are merely advisory in the frequency coordination process, and will not be honored by the Commission if presented with a timely-filed bona fide application by another party for the use of these channels.

In any event, UTC strenuously objects to Comsearch's argument that "future growth on high capacity, wide band systems still needs to be prior coordinated and protected."[33/] Such an approach constitutes a type of selective warehousing, and would allow common carriers to "lock out" private users who increasingly need wide band channels.

[32/] Comsearch Reply Comments, p. 14.

[33/] Comsearch Reply Comments, p. 14.

B. Interference Standards

UTC reiterates its absolute opposition to any degradation of the existing private microwave interference standards that would impair the reliability of private microwave operations. UTC recognizes that the common carrier and private microwave interference standards are converging and supports the adoption of consistent standards across all of the shared bands, provided system reliability is not compromised. To the extent that the interference standards currently differ, UTC agrees with TIA that TIA Committee TR14.11 should be recognized as the appropriate entity to develop consistent interference standards.[34/] Further, until such time as uniform interference criteria are adopted, UTC agrees with GTE's "When in Rome, do as the Romans do" approach, under which coordinators apply the interference criteria utilized by the majority of the users of a particular band.[35/]

C. Rules Should Not Inhibit Use of Analog

UTC's comments expressed concern that the technical standards ultimately adopted would inhibit or preclude the use of analog microwave systems in the bands above 3 GHz. A number of commenters appear to assume that all of the new facilities to be licensed in the reallocated/rechannelized microwave bands will

---

[34/] TIA, p. 13.

[35/] GTE, p. 7. Thus, for example, common carriers applying in the upper (private) 6 GHz band would coordinate under the guidelines of TIA Bulletin 10-E.

utilize digital equipment. For example, the Joint Commenters argue that existing 2 GHz microwave licensees who employ analog systems will likely use current generation digital equipment.[36/] UTC disagrees with this prediction and emphatically concurs with Comsearch's apt statement that, "contrary to popular belief, analog is not dead."[37/] As UTC noted in its comments, the majority of existing 2 GHz users are analog and, at least in the immediate future, the relocation of single hops within multi-hop analog systems would be more efficiently accomplished through the use of analog replacements.

Further, there continues to be a high degree of existing analog use in the microwave bands above 3 GHz. As UTC noted, according to the FCC's database approximately 94 percent of existing 6 GHz private microwave is analog. Similarly, Comsearch indicates that there are over 15,000 analog message frequencies and over 4,000 analog video frequencies currently licensed in the lower 6 GHz band.[38/]

Finally, it is not clear that current digital systems will be able to satisfactorily perform all of the operational requirements for which analog microwave systems are currently employed. For example, it has recently come to UTC's attention

---

[36/] Joint Commenters, p. 8.

[37/] Comsearch Reply Comments, p. 5.

[38/] Comsearch Reply Comments, p. 5.

that the combined throughput and re-sync time for digital microwave radio may fall outside of the necessary time parameters of an electric utility microwave system that is employed for protective relaying (instantaneous monitoring and control of high voltage lines). Protective relaying is one of the primary functions of existing analog utility microwave systems.

Accordingly, while UTC supports the adoption of rules allowing for the most efficient use of digital microwave systems such as automatic power control (ATPC),[39/] UTC opposes the adoption of any rules that would expressly or implicitly preclude the use of analog microwave equipment in the bands above 3 GHz.

D. "Temporary Licensing" Should Be Authorized

Motorola correctly notes that it can take a significant amount of time for a microwave system to be made operational once a decision is made to construct or relocate a system. UTC concurs with Motorola's estimate that the entire process can take 12-15 months.[40/] This also assumes that there are no zoning or environmental issues that could complicate the process. Motorola therefore recommends adoption of an "instant" or "temporary licensing" procedure similar to that authorized in the Part 90 land mobile radio services by which a microwave applicant could

---

[39/] UTC supports the Joint Commenters' recommendation to allow the use of ATPC in all microwave bands above 3 GHz utilizing up to 10 dB power increases, pp. 20-21.

[40/] Motorola, p. 6.

commence operation before final Commission action on its application.

UTC concurs with Motorola's recommendation. UTC supported this concept when it was first raised by Digital Microwave Corporation (DMC) in its May 1, 1989 "Petition for Rulemaking" (RM-6909). The DMC petition was dismissed due to FCC concerns over the number of private microwave applications returned for corrections. However, UTC believes a temporary licensing process can be established that will reduce the Commission's concerns.

First, and as discussed above, UTC recommends that "prior coordination notices," as required by Section 21.100, be used in all bands proposed to be shared between common carrier and private microwave applicants. By exchanging prior coordination notices with potentially-affected applicants and licensees, all parties will have a fair opportunity to object prior to the filing of the application and the commencement of operations under a "temporary" permit.

Second, UTC recommends that commencement of operations under a temporary permit be delayed until at least 10 days after the date the application appears on FCC Public Notice as having been accepted for filing. This will provide yet another opportunity for potentially-affected licensees and applicants to learn of the proposed operation prior to commencement of operation under the

temporary permit.[41/] It will provide the Commission staff an opportunity to give each application at least a cursory review for correctness and completeness so that patently defective applications can be dismissed before there is any possibility for operations under a temporary permit. This will also give the applicant some assurance that its application is basically in accordance with the Commission's application requirements, thereby minimizing the risks that it will have to terminate or adjust operations.

Delaying the effectiveness of the temporary permit until 10 days after the date of Public Notice would also eliminate any suggestion that the Commission lacks authority to grant "temporary licenses" in the microwave services. Section 309(f) of the Communications Act of 1934, as amended, permits the Commission to grant temporary authorizations for periods not exceeding 180 days "if it finds that there are extraordinary circumstances requiring temporary operations in the public interest and that delay in the institution of such temporary operations would seriously prejudice the public interest." "Grant" of a temporary authorization for microwave facilities even before an application or STA request is received by the Commission might be considered an improper exercise of the

---

[41/] Since point-to-point microwave stations are not required to transmit call signs or other identifying information, it is important that potentially-affected applicants and licensees have some form of notice before commencement of operation under a temporary permit.